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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/801,546

03/17/2004

Wataru Sotoyama

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EXAMINER

THOMPSON, CAMIE S

ART UNIT

PAPER NUMBER

1774

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/801,546

Applicant(s)

SOTOYAMA, WATARU

Examiner

Camie S. Thompson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed November 15, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8-13 and 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-5, 8-13, 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2006 has been entered.
2. Applicant's amendment and accompanying remarks filed November 15, 2006 are acknowledged.
3. Examiner acknowledges amended claims 1, 4, 18, 20, 24, 28 and 20.
4. Examiner acknowledges cancelled claims 14-16.
5. The rejection of claim 1 under 35 U.S.C. 102(e) as being anticipated by Toguchi et al., U.S. Patent Number 6,747,287 is overcome by applicant's amendment.
6. The rejection of claims 1 and 14-36 under 35 U.S.C. 103(a) as being unpatentable over Toguchi et al., U.S. Patent Number 6,747,287 in view of Ohasi et al., U.S. Patent Number 5,200,668 is overcome by applicant's amendment.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

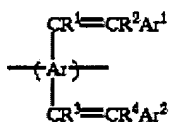
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2, 4-5, 8-13, 17-18, 23-31 and 34-36 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Igarashi, U.S. Patent Number 6,210,817.

Igarashi discloses styryl compounds that can be used in the light emissive layer of an organic luminous layer (see abstract). The reference discloses a styryl compound with the structure

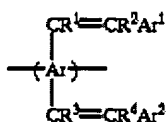


wherein Ar represents an aryl group (e.g. perylene group); R₁-R₄ can be hydrogen and Ar₁-Ar₂ can be diarylamino (see column 3, line 10-column 4, line 68). The reference also discloses in column 16, lines 2-21 that the luminescence layer can be comprised of a mixture of the referenced styryl compound and 8-quinolinol derivatives.

9. Claims 20-22 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi, U.S. Patent Number 6,210,817 in view of Motomatsu et al., U.S. Patent Number 6,689,493.

Igarashi discloses styryl compounds that can be used in the light emissive layer of an organic luminous layer (see abstract). The reference discloses a styryl compound with the structure

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wherein Ar represents an aryl group (e.g. perylene group); R₁-R₄ can be hydrogen and Ar₁-Ar₂ can be diarylamino (see column 3, line 10-column 4, line 68). Igarashi does not disclose the use of an aromatic amine derivative in the luminescent layer of the luminous element. Motomatsu discloses an organic electroluminescent element comprising a luminescent layer disposed between electrodes wherein the luminescent layer comprises a perylene derivative and an aromatic amine derivative (see column 6, lines 10-30). The combination of a perylene derivative and an aromatic amine derivative in the luminescent layer provides for excellent hole transporting ability. Therefore, it would have been obvious to one of ordinary skill in the art to have a mixture of an aromatic amine derivative with the perylene derivative of the Igarashi reference in order to elevate the recombination efficiency between the hole and the electron in the luminescent layer, thereby providing higher brightness.

Response to Arguments

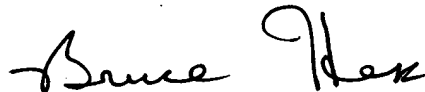
10. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If

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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Bruce Hess".

**B. HAMILTON HESS
PRIMARY EXAMINER**